

IN THE CLAIMS:

Please AMEND claims 14, 20, 29, 30, 32 and 35 and CANCEL claims 15, 28 and 31 without prejudice or disclaimer in accordance with the following:

1-13. (Cancelled)

14. (Currently Amended) A system for transmitting signals on a plurality of transmission channels, the system comprising:

a master unit configured to detect a vacant channel among a plurality of transmission channels and to transmit a signal on the vacant channel; and

at least one slave unit configured to scan the channels for the transmitted signal, the signal transmitted by the master unit defining a preamble having a length corresponding at least to the time required for the at least one slave unit to test the channels for the transmitted signal, the preamble having a predefined characteristic with system specific information indicating to the slave unit that the transmitted signal is a message originating from a master unit related to the same system,

wherein the at least one slave unit is further configured to, when having detected the predefined characteristic, interrupt the scanning and test the message received via said channel for an address, and

wherein said at least one slave unit further is configured to acknowledge receipt of the correctly addressed signal by transmitting a response signal to the master unit via said channel.

15. (Cancelled)

16. (Previously Presented) A system according to claim 14, further comprising control means for performing a scan of the channels.

17. (Previously Presented) A system according to claim 16, wherein the control means include means for operating in accordance with predefined algorithms.

18. (Previously Presented) A system according to claim 14, wherein the slave unit includes control means for performing a sequential scan of the plurality of channels.

19. (Cancelled)

20. (Currently Amended) A method of transmitting signals in a control system having at least two units operating on a plurality of transmission channels, one of the units operating as a master unit and the other of the units operating as a slave unit, the method comprising the steps of:

detecting a vacant channel among a plurality of transmission channels by a master unit;

transmitting a signal by the master unit via the vacant channel;

scanning the transmission channels by a slave unit for a transmitted signal;

detecting the transmitted signal on the vacant channel by the slave unit, the transmitted signal having a preamble with a length corresponding at least to a period of time required for the slave unit to test the transmission channels; and

testing the preamble by the slave unit for a predefined system specific characteristic to indicate to the slave unit that the transmitted signal originates from a master unit related to the same control system;

interrupting the scanning step when the slave unit detects the predefined system specific characteristic in the preamble of a received message;
testing the message received via said channel for an address; and
acknowledging receipt of the correctly addressed signal by transmitting a response signal to the master unit via said channel.

21. (Previously Presented) The method according to Claim 20, wherein the signal is selected from the group consisting of control signals, request signals, interrogation signals and combinations thereof.

22. (Previously Presented) The method according to Claim 20, wherein the plurality of transmission channels is from two to fifteen.

23. (Previously Presented) The method according to Claim 20, wherein the step of detecting the vacant channel includes testing for a carrier wave.

24. (Previously Presented) The method according to Claim 20, wherein the master unit detects the vacant channel by scanning the plurality of channels in accordance with a predefined algorithm.

25. (Previously Presented) The method according to Claim 24, further comprising the step of accounting by the master unit for previous transmissions.

26. (Previously Presented) The method according to Claim 20, wherein the slave unit performs the step of scanning the transmission channels in sequential order.

27. (Previously Presented) The method according to Claim 20, wherein the step of testing the transmission channels by the slave unit for the predefined characteristic is repeated at least once.

28. (Cancelled)

29. (Currently Amended) The method according to Claim ~~28~~20, wherein the predefined system specific characteristic is one of a symbol, a bit sequence, a predefined number of bytes, a predefined content, and combinations thereof.

30. (Currently Amended) The method according to Claim ~~28~~20, wherein the interrupting step occurs when the predefined system specific characteristic is repeated at least once.

31. (Cancelled)

32. (Currently Amended) The method according to Claim ~~31~~20, further comprising the step of resuming scanning of the transmission channels by the slave unit for transmitted signals if the received message does not include an address corresponding to an address for the slave unit.

33. (Previously Presented) The method according to Claim 20, further comprising the step of waiting by the master unit after transmitting the signal for a reply from the slave unit.

34. (Previously Presented) The method according to Claim 20, further comprising the step of resuming the step of detecting the vacant channel by the master unit when no reply or an erroneous reply is received.

35. (Currently Amended) A control system for transmitting signals, comprising:

a system master unit for detecting a vacant channel among transmission channels, the system master unit configured for transmitting a signal on the detected vacant channel; and

a system slave unit configured for electronic recognition of a plurality of master units including the system master unit, the system slave unit further configured for electronic communication with the system master unit, wherein the system slave unit is configured for scanning the transmission channels for a transmitted signal from the plurality of master units including the system master unit, the system slave unit further configured to test a preamble of the transmitted signal for a predefined system specific characteristic to indicate to the system slave unit that the transmitted signal originates from the system master unit, the preamble having a length corresponding at least to a period of time required for the system slave unit to test the transmission channels;

wherein the system slave unit is further configured to, when having detected the predefined characteristic, interrupt the scanning and test the message received via said channel for an address, and

wherein the system slave unit further is configured to acknowledge receipt of the correctly addressed signal by transmitting a response signal to the system master unit via said channel.

36. (Previously Presented) The system according to Claim 35, wherein the signal

is one of a control signal, a request signal or an interrogation signal.

37. (Previously Presented) The system according to Claim 35, wherein at least one of the system master unit and the system slave unit are configured to test for a carrier wave.

38. (Previously Presented) The system according to Claim 35, wherein the system master unit is further configured to detect the vacant channel by scanning the plurality of channels with transmissions in accordance with a predefined algorithm.

39. (Previously Presented) The system according to Claim 38, wherein the system master unit is further configured to account for previous transmissions.

40. (Previously Presented) The system according to Claim 38, wherein the system slave unit is further configured to scan the channels in a sequential order.

41. (Previously Presented) The system according to Claim 35, wherein the predefined system specific characteristic is one of a symbol, a bit sequence, a predefined number of bytes, a predefined content, and combinations thereof.

42. (Previously Presented) The system according to Claim 35, further comprising an address in the transmitted signal to indicate to the system slave unit that the transmitted signal is a message for the system slave unit from the system master unit, the address establishing electronic communication between the system master unit and the system slave unit.